Tandem Air Vacuum Service Manual

R30

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WARNING! To reduce the risk of fire, electric shock, or injury:

1. Do not leave vacuum unattended when plugged in. Unplug from outlet when not in use and before servicing.

2. Do not attempt to service the unit while vacuum is plugged in.

3. WARNING: ELECTRIC SHOCK COULD OCCUR IF USED OUTDOORS OR ON WET SURFACES.

4. Do not allow to be used as a toy. Close attention is necessary when used by or near children.

5. Use only as described in this manual. Use only manufacturer's recommended attachments.

6. Do not use with damaged cord or plug. If vacuum is not working as it should, has been dropped, damaged, left outdoors, or dropped into water, return it to a service center.

7. Do not pull or carry by cord, use cord as a handle, close a door on cord, or pull cord around sharp edges or corners. Do not run vacuum over cord. Keep cord away from heated surfaces.

8. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.

9. Do not handle plug or vacuum with wet hands.

10. Turn off all controls before unplugging.

11. Do not put any object into openings. Do not use with any opening blocked; keep free of dust, lint, hair and anything that may reduce air flow.

12. Keep hair, loose clothing, fingers and all parts of body away from openings and moving parts.

13. Do not pick up anything that is burning or smoking, such as cigarettes, matches or hot ashes.

14. Do not use without vacuum bag and/or filters in place.

15. Use extra care when cleaning on stairs.

16. Do not use to pick up flammable or combustible liquids such as gasoline or use in areas where they may be present.

17. For grounded models, connect to a properly grounded outlet only. See Grounding Instructions.

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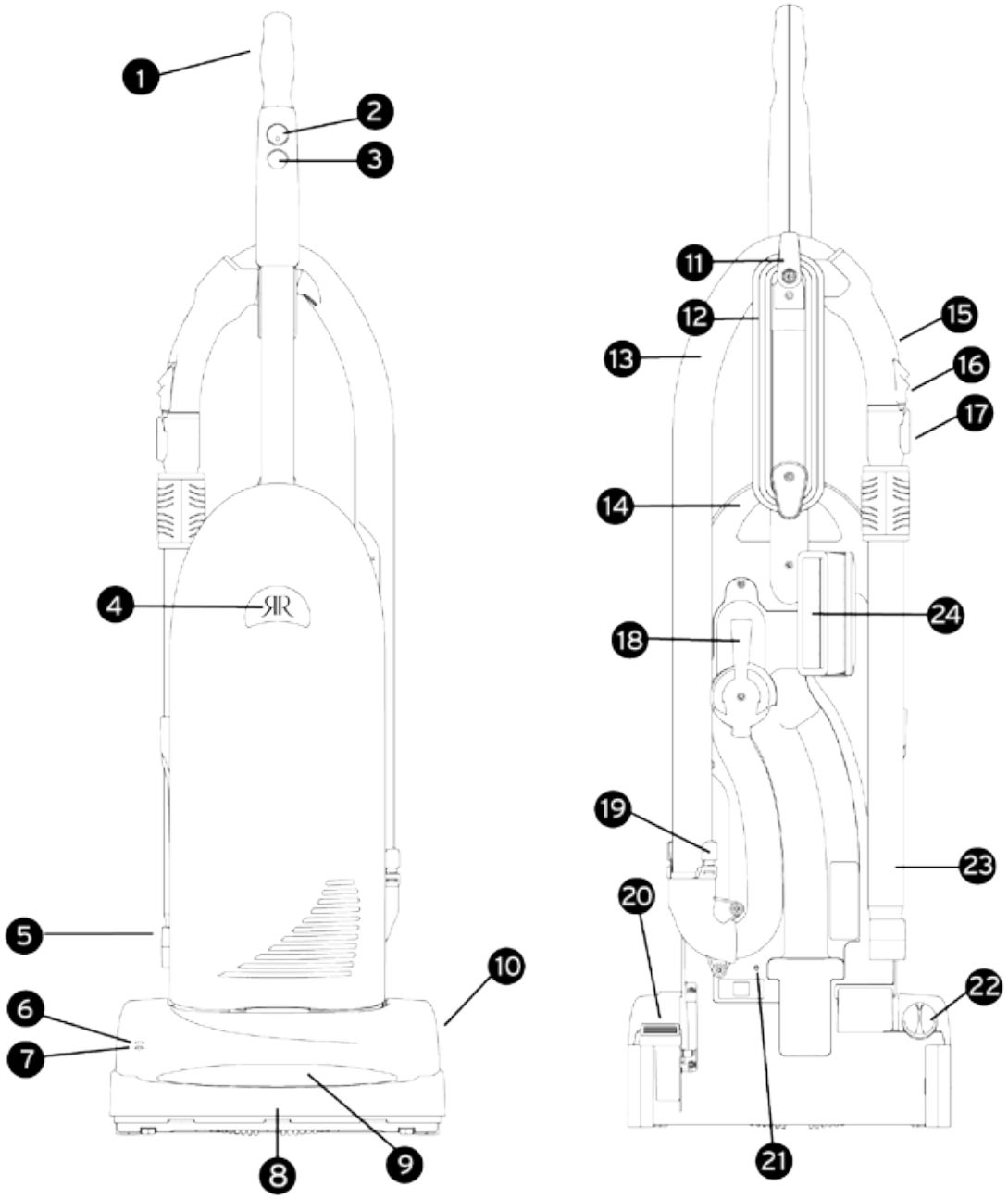
I. Basic Assembly and Operation

A. Parts Identification



I. Basic Assembly and Operation

A. Parts Identification (Continued)

1	Ergonomic Handle
2	Main On/Off Power Switch
3	Carpet Button
4	Bag Compartment Latch (to Replace Vacuum Bag and Filters)
5	Crevice Tool
6	Full Bag Indicator
7	Brushroll Jam Indicator
8	Furniture Guard
9	LED Headlights
10	Vacuum Nozzle
11	Quick Release Upper Cord Hook
12	Power Cord
13	Stretch Hose
14	Carrying Handle
15	Hose Handle
16	Suction Release Valve
17	Wand Release Button
18	Tool Activation Dial
19	Hose Disconnect Cuff
20	Handle Release Pedal
21	Thermal Motor Protection Reset Button
22	Carpet Height Adjustment Dial
23	Telescopic Wand
24	Combination Dusting/Upholstery Brush

I. Basic Assembly and Operation

B. General Performance

- Keep machine and all accessories clean and in good operating condition.
- Change vacuum bags and filters as recommended to maintain optimum cleaning efficiency.
- Always use genuine bags, belts and parts, as use of other products may result in poor cleaning or filtration performance. Tacony filtration products are designed for maximum performance.
- Store machine carefully in dry area.

C. Installing the Handle

The vacuum cleaner and the handle are packed seperately. To assemble handle:

1. Remove the handle screw (Fig. A.)
2. Insert the handle by sliding into the opening in the top of the vacuum (Fig. B.)
3. Reinstall handle screw (Fig. C.)

Fig. A

Fig. B

Fig. C

I. Basic Assembly and Operation

D. Operation

1. On/Off Switch

   To Turn the vacuum on push the handle switch to the on position (Fig. A.)
   To turn the vacuum off, push the handle switch to the off position. (Fig. B)

2. Carpet/Floor Switch

   When the machine is first turned on it is always in carpet mode. To turn off the second motor and disengage the agitator for bare floor or tool cleaning press the carpet floor switch (Fig. C.) The switch light and headlights will turn off.

3. How to Lower the Handle

   To release the handle, step on the pedal at the left rear corner of the vacuum cleaner (Fig. D) and pull back on the handle.There are two adustment levels. Press the pedal a second time to reach the lowest position.

Fig. A

Fig. B

Fig. C

Fig. D

I. Basic Assembly and Operation

E. Thermal Reset Switch

Thermal Reset Switch
Your vacuum cleaner comes equipped with a thermal protection switch. This is designed to protect your vacuum cleaner from damage due to overheating in a clogged condition. Should this situation occur, the thermal protector will safely shut off your vacuum cleaner to avoid any potential damage.

To reset the thermal protector:

CAUTION: Unplug the vacuum cleaner before servicing.

1. Check for problem (obstruction or clog in the nozzle inlet, direct air motor, hose, or wand, overfu bag, or clogged filter.)
2. Correct problem.
3. Locate and press the thermal reset switch on the back of the vacuum cleaner (Fig. A and B.)
4. Plug vacuum cleaner in and begin using again.

Fig. A

Fig. B

II. Maintenance and Repairs

A. How to Change the Vacuum Bag

CAUTION: Unplug the vacuum cleaner before servicing.

NOTE: Always operate the vacuum cleaner with a vacuum bag installed.

1. Unplug the vacuum cleaner.
2. Remove the dust cover.
3. Remove the old bag by pulling the tab as shown (Fig. A.)
4. Pull up on the tab to close the bag and remove it from the holder (Fig. B.)
5. Install the new vacuum bag by sliding it into the holder (Fig. C.)
6. Then press the top of the bag collar back until it locks onto the post. (Fig. D)
7. Reinstall the dust cover.

Fig. A

Fig. B

Fig. C

Fig. D

II. Maintenance and Repairs

B. How to Replace the Filters

CAUTION: Unplug the vacuum cleaner before servicing.

1. Remove the dust cover.
2. Remove the HEPA filter located on the front of the motor cover and discard (Fig. A.) Press the new filter into place.
3. Locate the secondary filter inside the bag compartment and remove as shown in Fig. B. Reinstall the new filter as shown in Fig C.
4. Lay the machine flat to expose the direct air motor filter on the motor cover. Remove the direct air motor filter cartridge (Fig. D) and discard. Install the new direct air motor cartridge.
5. Reinstall the dust cover.

Fig. A

Fig. B

Fig. C

Fig. D

II. Maintenance and Repairs

C. Removing the baseplate

CAUTION: Unplug the vacuum cleaner before servicing.

1. Flip the vacuum over so the baseplate is showing.
2. Remove the four (4) screws shown in Fig. A.
3. Pull the baseplate off (Fig. B.)

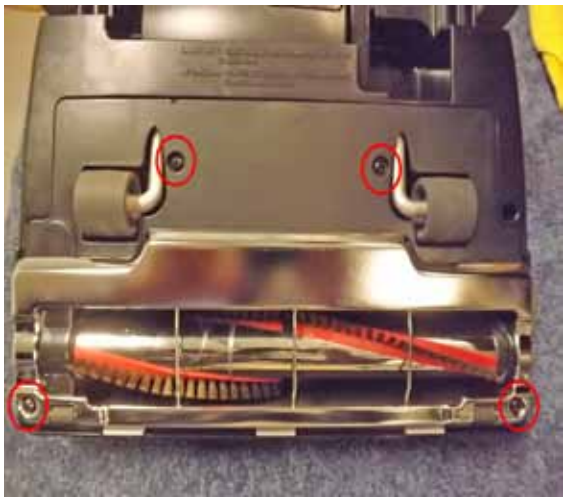


Fig. A

Fig. B

Fig. C

II. Maintenance and Repairs

D. Replacing the Belt

CAUTION: Unplug the vacuum cleaner before servicing.

NOTE: The R30 has a lifetime belt. The belt should only be replaced if it is broken or damaged.

1. Remove the baseplate as shown on page 13.
2. Remove the four (4) screws holding the nozzle cover (Fig. A.)
3. Flip the machine over to remove the nozzle cover.
4. Flip the machine back over and remove the agitator. (Fig. B.)
5. Discard the old belt and place the new belt around the motor shaft pulley (Fig. C.)
6. Position the belt underneath the hall sensor pulley as shown in Fig. D.
7. Loop the belt around the agitator pulley and roll it into place.
8. Reinstall the nozzle cover. Be sure to lock the front tabs into place first.
9. Reinstall the baseplate. Start by locking the front tabs and then reinstall the four (4) screws.

Fig. A

Fig. B

Fig. C

Fig. D

II. Maintenance and Repairs

E. Agitator Disassembly (Replacing the brush strips)

CAUTION: Unplug the vacuum cleaner before servicing

1. Remove the baseplate as shown on page 13. Remove the agitator.
2. Remove the rubber end caps. Using two ratchets with 7/16” sockets set to opposite directions loosen until one of the nuts breaks loose (Fig. A.)
3. Remove the nut and metal end cap. Remove the two (2) screws securing the felt ring retainer. (Fig. B.)
4. Remove the part underneath the ring retainer (either the pulley or the bearing cartridge depending on which side of the agitator you are working on.) It may be necessary to use a small screwdriver or other tool to pry the bearing cartridge or pulley out of the agitator core (Fig. C.)
5. Grip the agitator shaft with a pair of vice grips and use one of the rachets with the 7/16” socket to remove the remaining endcap (Fig. D.)

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Fig. A

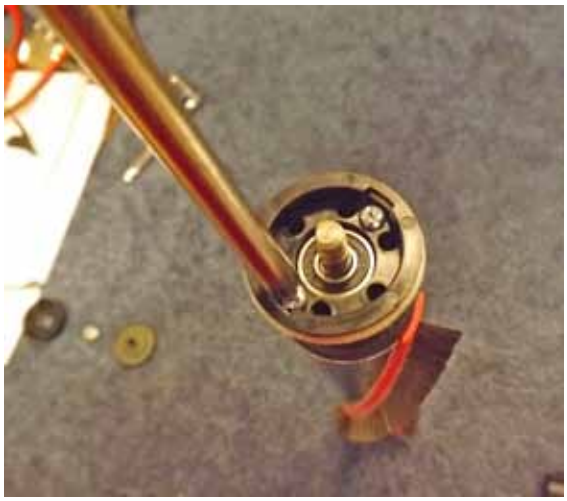

Fig. B

Fig. C

Fig. D

II. Maintenance and Repairs

E. Agitator Disassembly (Replacing the brush strips) Continued

CAUTION: Unplug the vacuum cleaner before servicing

5. Remove the two (2) screws securing the felt ring retainer or the pulley on the opposite side (Fig. A.)
6. Slide out brush strips from the ends of the core. Use needle nose pliers to grip strips if necessary (Fig. B.)
7. New brush strips will be stiff. If they are difficult to install warm them with a heat gun or other method to soften.
8. Fig. C: A fully disassembled agitator.

Fig. A

Fig. B

Fig. C

II. Maintenance and Repairs

F. Replacing the Dust Cover Latch

CAUTION: Unplug the vacuum cleaner before servicing.

1. Remove the dust cover.
2. Remove the two screws holding the latch in place (Fig. A.)
3. Discard the old latch and install the new one shown in Fig. B. Secure with the two (2) screws.

Fig. A

Fig. B

II. Maintenance and Repairs

G. Replacing the Hose Guide

CAUTION: Unplug the vacuum cleaner before servicing.

1. Remove the wand and hose.
2. Remove the screw securing the hose guide (Fig. A) and remove hose guide (Fig. B.)
3. Install new hose guide with screw. Reattach wand and hose.

H. Replacing the Upholstery Tool Clip

CAUTION: Unplug the vacuum cleaner before servicing.

1. Remove the screw holding the clip (Fig. C) and remove clip.

Fig. A

Fig. B

Fig. C

II. Maintenance and Repairs

I. Replacing the Upper Crevice Tool Clip

CAUTION: Unplug the vacuum cleaner before servicing.

1. Remove screw securing clip (Fig. A.)
2. Remove old clip and reinstall new one as shown. in Fig. B.

J. Replacing the Lower Crevice Tool Holder/Wand Dock

CAUTION: Unplug the vacuum cleaner before servicing.

1. Remove screw securing clip (Fig. C.)
2. Remove old clip and reinstall new one as shown. in Fig. D.

Fig. A

Fig. B

Fig. C

Fig. D

II. Maintenance and Repairs

K. Replacing the Upper Cord Hook

CAUTION: Unplug the vacuum cleaner before servicing.

1. Remove the screw holding the upper cord hook (Fig. A.)
2. Remove the cord hook, screw, washer and spring (Fig. B.)
3. Place the screw through the washer and then place the spring after the washer. Insert the screw into the upper cord hook as shown (Fig. C.) and install on handle.

Fig. A

Fig. B

Fig. C

II. Maintenance and Repairs

L. Replacing the Upper Cord Hook Mount

CAUTION: Unplug the vacuum cleaner before servicing.

1. Remove the upper cord hook as shown on the previous page.
2. Remove upper cord hook mount screw (Fig. A.)
3. Remove upper wand handle cradle (Fig. B.)
4. Remove upper wand handle cradle base (Fig. C.)
5. When reassembling route the cord under the cradle base as shown in Fig. D.

Fig. A

Fig. B

Fig. C

Fig. D

II. Maintenance and Repairs

M. Replacing the Lower Cord Hook

CAUTION: Unplug the vacuum cleaner before servicing.

1. Remove the main handle screw and remove the handle from the vacuum (Fig. A.)
2. Remove the lower cord hook screw (Fig. B.)
3. Remove the lower cord hook (Fig. C) and discard.
4. Line up the new cord hook with the rivet in the handle tube and secure with the screw (Fig. D.)

Fig. A

Fig. B

Fig. C

Fig. D

II. Maintenance and Repairs

N. Replacing the On/Off Switch

CAUTION: Unplug the vacuum cleaner before servicing

1. Remove the handle assembly from the vacuum by taking out the handle screw (Fig. A.)
2. Remove the six (6) screws in the handle grip to separate the two halves (Fig. B.)
3. Use needle nose pliers to remove the leads from the switch. Squeeze the flag connectors as shown to release them (Fig. C and D.)

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Fig. A

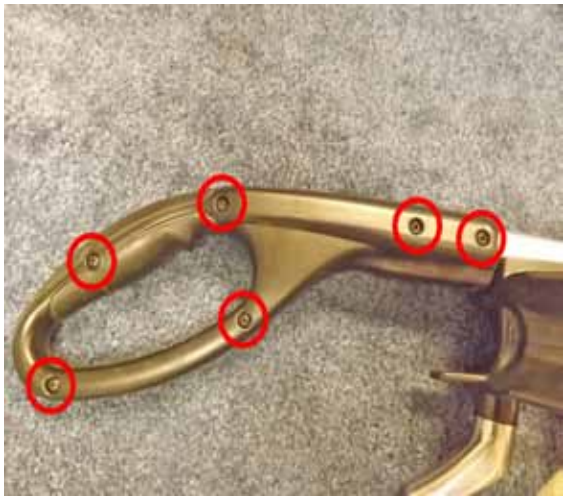

Fig. B

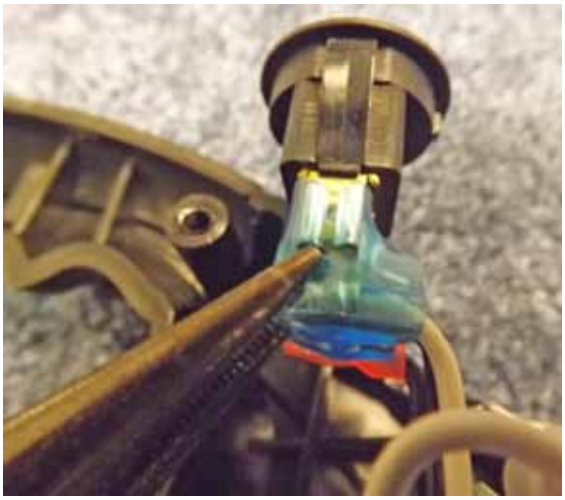

Fig. C

Fig. D

II. Maintenance and Repairs

N. Replacing the On/Off Switch (Continuted)

CAUTION: Unplug the vacuum cleaner before servicing.

4. Discard old switch. Connect the flag connectors to the new switch and position it in the handle grip. NOTE: The switch should be positioned so that the on position is forward (toward the nozzle) and the off position is back (toward the top of the handle.) as shown in Fig. F.
5. Make sure all wires are routed correctly (Fig. E) and reinstall the other half of the handle grip. Be careful not to pinch any wires in the process. Allow the switch to hang out of the front of the grip.
6. Reinstall the six (6) screws in the grip and then push the switch in place (Fig. F.)

Fig. E

Fig. F

II. Maintenance and Repairs

O. Replacing the Power Cord

CAUTION: Unplug the vacuum cleaner before servicing.

1. Remove the handle assembly from the vacuum and dissasemble the handle grip as shown on page 23.
2. Disconnect power cord lead from switch by squeezing the tab on the flag connector with needle nose pliers as shown (Fig. A.)
3. Disconnect the white leads. The easiest way is to use two pairs of pliers as shown (Fig. B.). Grip the connectors with the back part of the pliers and press the tips together to separate the connectors.
4. Remove the screw for the upper cord hook base to remove the upper cord hook assembly (Fig. C.)
5. Remove and discard the old cord.
6. Connect the leads from the new cord Route the cord under the cord hook base as shown in Fig. D and re-attach upper cord hook assembly .
7. Reassemble the handle grip. Route all wires properly. Be careful not to pinch any wires in the process. Make sure the switch is in properly with the off side towards the top of the handle.

Fig. A

Fig. B

Fig. C

Fig. D

II. Maintenance and Repairs

P. Replacing the Handle Harness

CAUTION: Unplug the vacuum cleaner before servicing.

1. Remove the handle assembly from the vacuum by taking out the handle screw.
2. Remove the six (6) screws in the handle grip to separate the two halves (Fig. A.)
3. Disconnect handle harness lead from switch by squeezing the tab on the flag connector with needle nose pliers as shown (Fig. B.)
4. Disconnect the white leads. The easiest way is to use two pairs of pliers as shown (Fig. C and D.) Grip the connectors with the back part of the pliers and press the tips together to separate the connectors.

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Fig. A

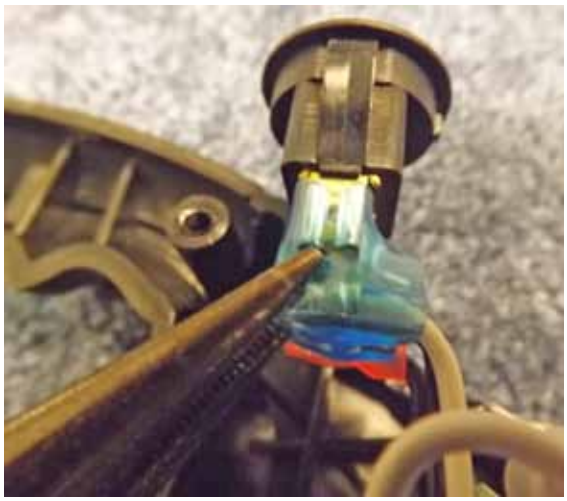

Fig. B

Fig. C

Fig. D

II. Maintenance and Repairs

P. Replacing the Handle Harness (Continued)

CAUTION: Unplug the vacuum cleaner before servicing

5. Remove upper cord hook base screw (Fig. E.) Remove upper cord hook base.
6. Remove lower cord hook screw and lower cord hook (Fig. F.)
7. Use a small screwdriver or other object to remove the base connector as shown in Figures G and H.

Continued on next page

Fig. E

Fig. F

Fig. G

Fig. H

II. Maintenance and Repairs

P. Replacing the Handle Harness (Continued)

CAUTION: Unplug the vacuum cleaner before servicing

8. Use a screwdriver to pry open the base connector (Fig. I.) Remove the harness from the base connector.
9. Remove the handle harness by pulling it out through the grip end of the handle (Fig. J.)
10. Run new harness through the tube. Insert it into the base connector as shown in figure K. Close the connector and insert it into the tube. Make sure the connector is postioned as shown in Fig. L.

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Fig. I

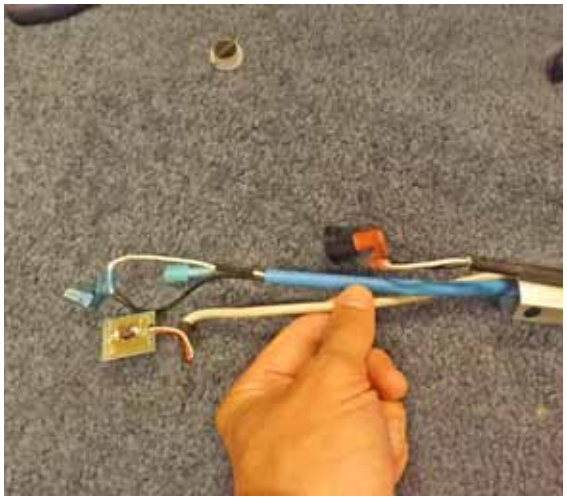

Fig. J

Fig. K

Fig. L

II. Maintenance and Repairs

P. Replacing the Handle Harness (Continued)

CAUTION: Unplug the vacuum cleaner before servicing.

11. Route power cord under upper cord hook base as shown in Figure M.
12. Reinstall cord hook base (Fig. N.)
13. Connect the leads on the harness to the handle switch and power cord. See wiring diagram on page 70. .
14. Position the left half of the handle grip under the handle tube. Position the harness board, the on/off switch, and the carpet/floor button cover. Route the wiring carefully as shown in Fig. O.
15. Position the right half of the handle over the left and reinstall the six (6) screws (Fig. P.) Be careful not to pinch any wires in the process.

Fig. M

Fig. N

Fig. O

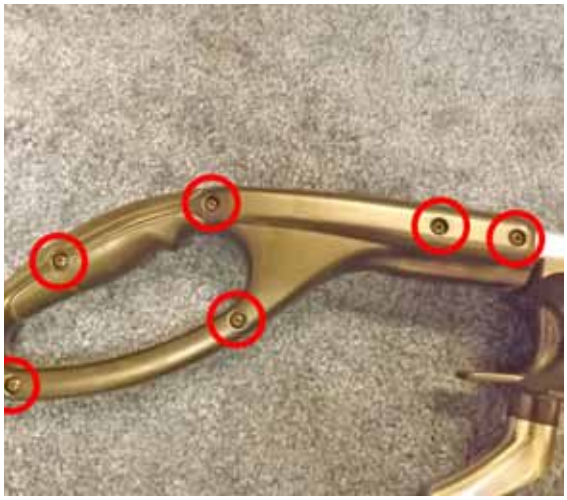

Fig. P

II. Maintenance and Repairs

Q. Replacing the Bag Holder Assembly

CAUTION: Unplug the vacuum cleaner before servicing

1. Remove the dust cover and bag (Fig. A.)
2. Remove the two screws shown in Fig. B.
3. Remove and discard the old bag holder assembly (Fig. C.) Install the new one using the two screws (Fig. B.)
4. Put the bag back in and reattatch the dust cover.

Fig. A

Fig. B

Fig. C

II. Maintenance and Repairs

R. Removing the Back Cover

CAUTION: Unplug the vacuum cleaner before servicing.

1. Turn the roto-knob to the left far enough to disengage the switch. Remove the screw for the knob and the roto-valve switch cover plate (Fig. A.)
2. Remove the roto-valve knob and the switch cover plate Remove the small silver screw that secures the roto-valve micro switch (Fig. B.)
3. Remove the two (2) screws securing the cleanout door (Fig. C.)
4. Remove the two (2) screws securing the hose inlet (Fig. D.)

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Fig. A

Fig. B

Fig. C

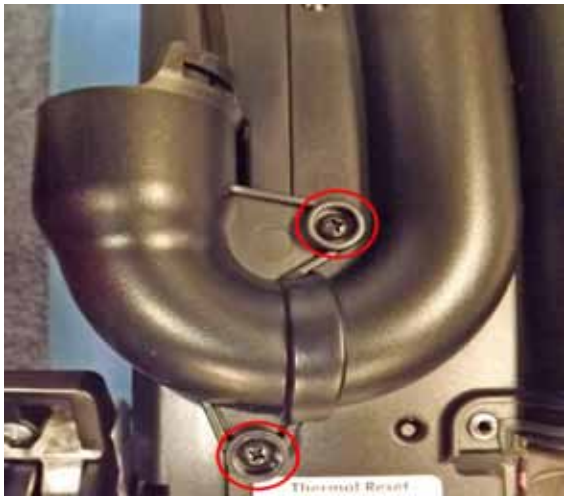

Fig. D

II. Maintenance and Repairs

R. Removing the Back Cover (Continued)

CAUTION: Unplug the vacuum cleaner before servicing

5. Remove the nine (9) screws securing the back cover (Fig. E.) Remove back cover (Fig. F.).
6. To reassemble: first install the roto-valve into the back cover as shown in Fig. G. It is imortant that the roto-valve is turned slightly counter-clockwise from the starting position. This will ensure that the valve knob handle doesn't damage the micro-switch. Insert the roto-valve micro switch through the hole in the back cover (Fig. H.)
7. Position the back cover and secure with the nine (9) screws (Fig. E.)
8. Reinstall the micro switch cover, valve knob handle, and hose inlet.

Fig. E

Fig. F

Fig. G

Fig. H

II. Maintenance and Repairs

S. Replacing the Height Adjust Assembly

CAUTION: Unplug the vacuum cleaner before servicing

1. Remove the four (4) screws securing the nozzle cover (Fig. A) and remove the cover (Fig. B.)
2. Remove the two (2) screws securing the heght adjust assembly (Fig. C) and remove the assembly.
3. Replace the assembly. Be sure to line up the arrows on the top of the height adjust assembly as shown in Fig. D and secure with the two screws.
4. Install nozzle cover and base plate.

Fig. A

Fig. B

Fig. C

Fig. D

II. Maintenance and Repairs

T. Replacing the Height Adjust Wheels

CAUTION: Unplug the vacuum cleaner before servicing.

1. Follow steps 1-2 on the previous page.
2. Flip the machine over and remove the four (4) screws holding the baseplate (Fig A.) Remove base plate.
3. Remove the height adjust axle (Fig. B.)
4. Use a screwdriver or other small tool to remove the capture ring from each wheel. Remove the wheels.
5. Install new wheels as shown and secure with a capture ring. Use a 1/32 nut driver or similar tool to press the ring into place.

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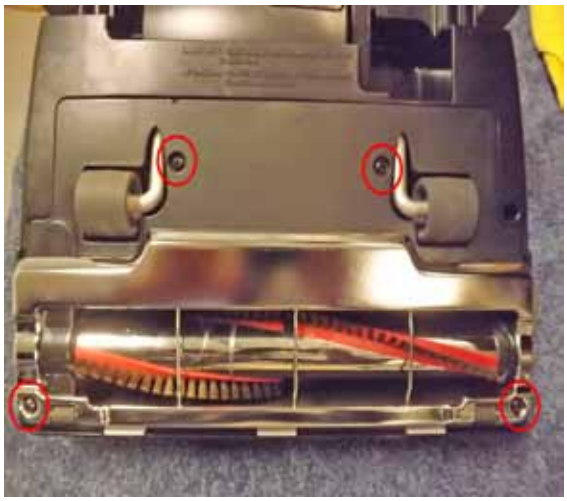

Fig. A

Fig. B

Fig. C

Fig. D

II. Maintenance and Repairs

U. Replacing the Rear Wheels

CAUTION: Unplug the vacuum cleaner before servicing.

1. Use a small screwdriver or other tool to pop the hubcap loose (Fig. A.) Remove the hubcap (Fig. B.)
2. Remove the e-clip (Fig. C..)
3. Remove the wheel. Slide the new wheel onto the shaft and secure with an e-clip (Fig. D.) Line up the tabs on the hubcap with the holes in the wheel and press it into place.

Fig. A

Fig. B

Fig. C

II. Maintenance and Repairs

V. Separating the Nozzle from the Dust Compartment Body

CAUTION: Unplug the vacuum cleaner before servicing

1. Remove the four screws securing the baseplate and remove the baseplate.
2. Remove the agitator.
3. Remove the four (4) screws securing the nozzle cover and remove the cover (Fig. A.)
4 Place the vacuum in the upright position and remove the two screws for the spring assist axle. (Fig B.)
5. Lay the machine flat. Remove the two (2) screws securing the light board holder (Fig. C.).
6. Move the light board to acess the inlet cover underneath (Fig. D.)

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Fig. A

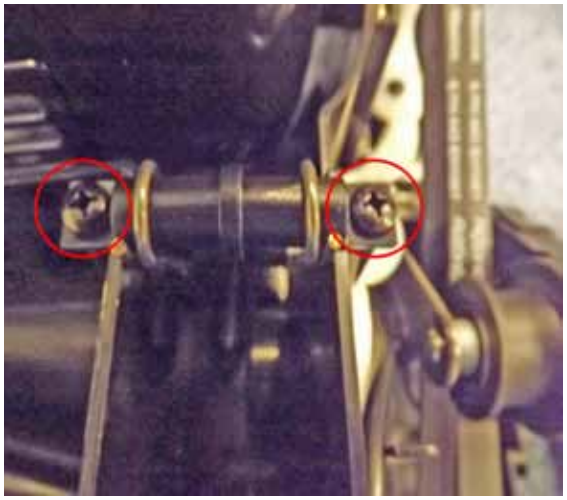

Fig. B

Fig. C

Fig. D

II. Maintenance and Repairs

V. Separating the Nozzle from the Dust Compartment Body (Continued)

CAUTION: Unplug the vacuum cleaner before servicing

5. Remove the six (6) screws securing the airpath cover (Fig. E.) Remove the airpath cover.
6. Remove the two (2) screws from the right pivot bracket (Fig. F.)
7. Remove the two (2) screws from the left pivot bracket and the screw holding the rear strain relief washer (Fig. G.)
8. Lift and separate the body of the vacuum from the nozzle (Fig. H.)

Fig. E

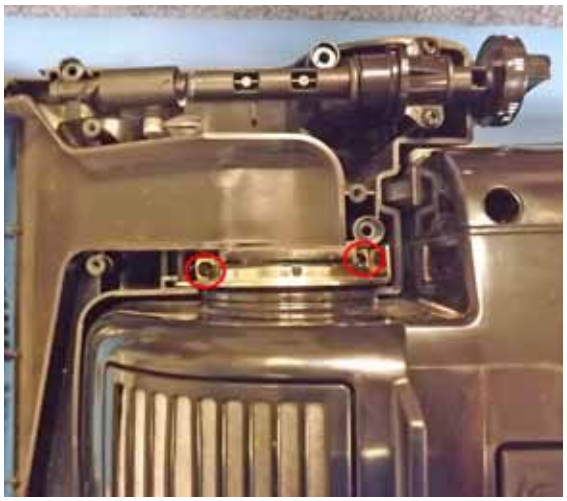

Fig. F

Fig. G

Fig. H

II. Maintenance and Repairs

W. Accesing the Motor Compartment

CAUTION: Unplug the vacuum cleaner before servicing

1. Follow the instructions on pages 36-37 to separate the nozzle from the dust compartment body.
2. Remove the direct air motor inlet seal.
3. Remove the plastic pivots on each side of the direct air motor. It may be necessary to pry with a small screwdriver (Fig. B and Fig. C and D.)

Continued on next page

Fig. A

Fig. B

Fig. C

Fig. D

II. Maintenance and Repairs

W. Accesing the Motor Compartment (Cont.)

CAUTION: Unplug the vacuum cleaner before servicing.

4. Remove the five (5) screws securing the motor cover (Fig. E.)
5. Remove the motor cover (Fig. F and Fig. G.)

Fig. E

Fig. F

Fig. G

II. Maintenance and Repairs

X. Fan Replacement

CAUTION: Unplug the vacuum cleaner before servicing

1. Access motor compartment as shown on page 38-39.
2. Remove the screw holding the direct air motor (Fig. A.)
3. Remove the direct air motor and take off the fan housing by removing the 3 screws.
4. Use vice grips or another method to clamp the shaft in place (Fig. B.)
5. Remove the nut using a 7/16” in or 11mm socket (Fig. C). NOTE: This is a reverse threaded nut.
6. Remove the nut, then the washer and fan (Fig. D.) Take care not to misplace the washer under the fan.
7. Replace the fan followed by the second washer and the nut. Replace the outer fan housing securing with the three screws.
8. Reinstall the direct air motor into the housing and secure with the screw (Fig. A.)
9. Reassemble being careful not to pinch any wires in the process.

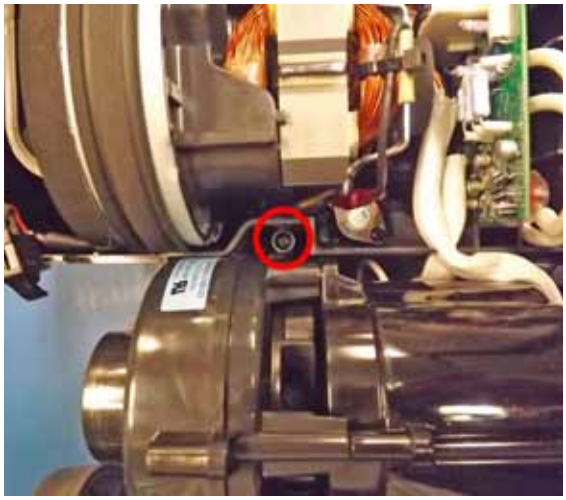

Fig. A

Fig. B

Fig. C

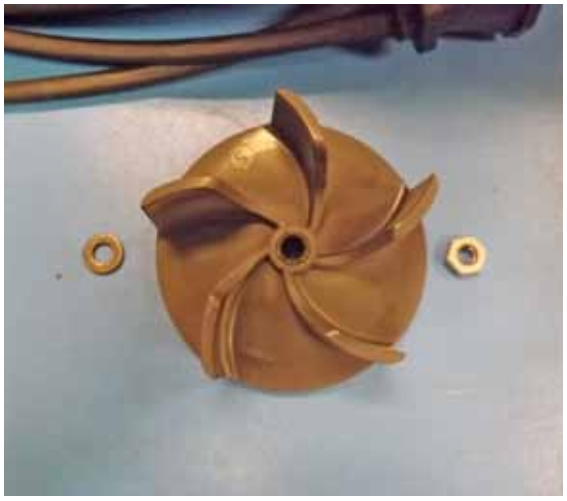

Fig. D

II. Maintenance and Repairs

Y. Reassemble from Motor Compartment

CAUTION: Unplug the vacuum cleaner before servicing.

1. Make sure all the wires are routed properly as shown in Fig. A.
2. Take care not to pinch any wires when positioning the motor cover. Install the five (5) screws to secure the motor cover.
3. Install the left and right pivot bushings. Line up the notch and tab as shown in Fig. C. Make sure the left hand pivot is installed as shown in Fig. D.

Continued on next page

Fig. A

Fig. B

Fig. C

Fig. D

II. Maintenance and Repairs

Y. Reassemble from Motor Compartment (Continued)

CAUTION: Unplug the vacuum cleaner before servicing.

4. Reinstall the direct air motor inlet gasket (Fig. E.)
5. Position the metal pivot brackets over the plastic ones. Hold the machine by the metal brackets and lift the motor compartment up as shown in Fig. E.
6. Position the metal brackets so that they are lined up with the slots as shown in Fig. F.
7. Route the main wire harness as shown and use a ziptie to secure it to the post (Fig. G.)

Continued on next page

Fig. D

Fig. E

Fig. F

Fig. G

II. Maintenance and Repairs

Y. Reassemble from Motor Compartment (Continued)

CAUTION: Unplug the vacuum cleaner before servicing.

8. Reinstall the four (4) screws securing the metal pivot brackets and the one screw and washer for the wire harness (Fig. H and Fig I.)
9. Replace the six (6) screws securing the airpath cover (Fig. J.)
10. Place the vacuum in the upright position and reinstall the two (2) screws for the spring assist axle (Fig. K.)

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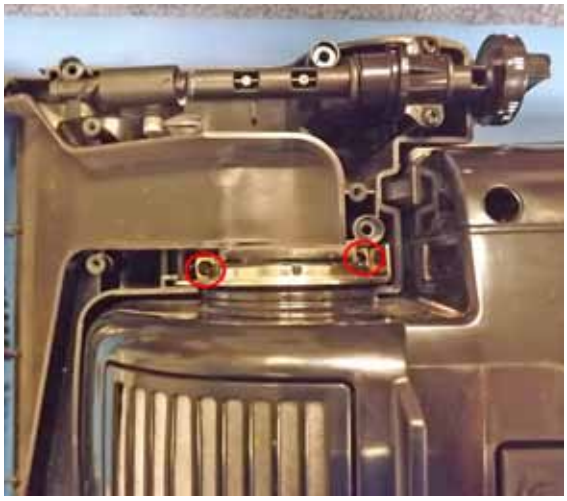

Fig. H

Fig. I

Fig. J

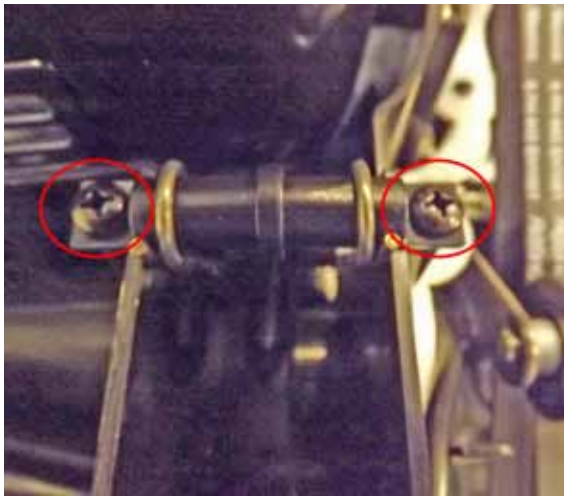

Fig. K

II. Maintenance and Repairs

Y. Reassemble from Motor Compartment (Continued)

CAUTION: Unplug the vacuum cleaner before servicing.

11. Press the foot pedal and lay the vacuum flat.
12. Reinstall the light board holder with two (2) screws (Fig. L.)
13. Position the belt around the direct air motor shaft and run it between the arms of the hall sensor frame and down through the opening in the nozzle (Fig. M.)
14. Loop the belt around the agitator and roll it into place (Fig. N.)

Continued on next page

Fig. L

Fig. M

Fig. N

Y. Reassemble from Motor Compartment (Continued)

CAUTION: Unplug the vacuum cleaner before servicing.

15. Flip the vacuum back over and install the nozzle cover. Be sure to line up the tabs at the front as shown in Fig. O. Secure with four (4) screws (Fig. P.)
16. Install the baseplate by first inserting the tabs (Fig. Q) and then securing with four screws (Fig. R).

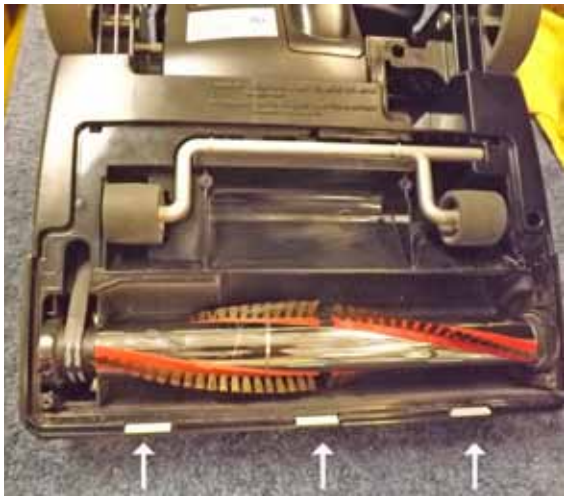

Fig. O

Fig. P

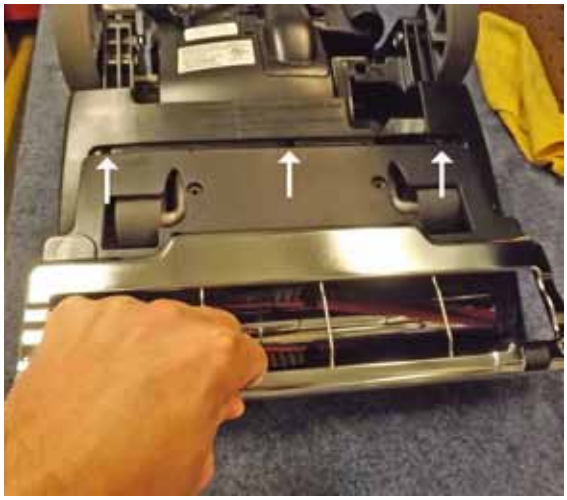

Fig. Q

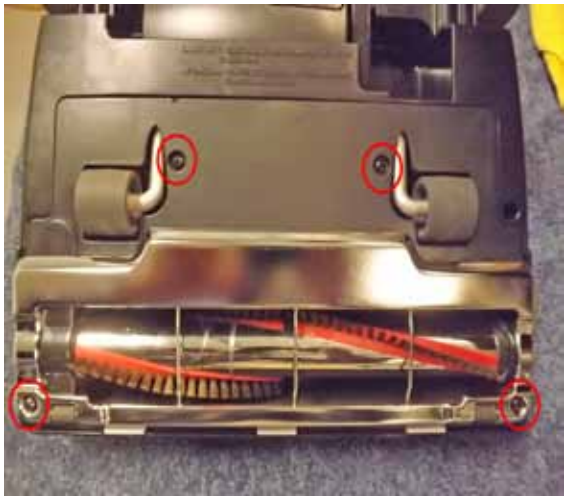

Fig. R

II. Maintenance and Repairs

Z. Replacing the Foot Pedal Assembly or Tilt Lock Spring

CAUTION: Unplug the vacuum cleaner before servicing.

1. Separate the nozzle from the dust compartment body as shown on pages 36-37.
2. Locate and remove the e-clip securing the foot pedal axle (Fig. A.) Remove the foot pedal axle by sliding it from the inside of the nozzle housing (Fig. B.)
3. Remove the foot pedal (Fig. C) and tilt lock spring (Fig. D.)

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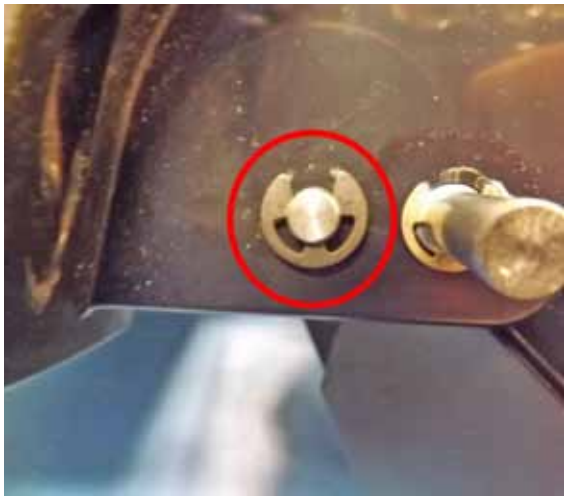

Fig. A

Fig. B

Fig. C

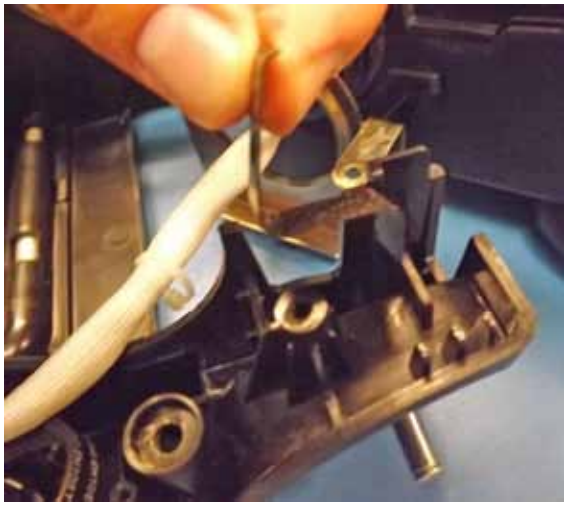

Fig. D

II. Maintenance and Repairs

Z. Replacing the Foot Pedal Assembly or Tilt Lock Spring (Continued)

CAUTION: Unplug the vacuum cleaner before servicing.

4. Hold the tilt lock spring as shown in Fig. E.
5. Lower the spring into the foot pedal slot and postition as shown in Fig F.
6. Insert the foot pedal in front of the spring as shown in Fig. G
7. Reinstall the foot pedal axle from the inside of the nozzle and secure with the e-clip on the outside (Fig. H)
8. Test the foot pedal to ensure it accuates properly. Reassemble the vacuum.

Fig. E

Fig. F

Fig. G

Fig. H

II. Maintenance and Repairs

AA. Replacing the Hall Sensor Assembly

CAUTION: Unplug the vacuum cleaner before servicing

NOTE: Hall Sensor componants are sensitive to static shock. Use grounding strap and anti-static mat if possible.

1. Remove the four (4) scrws holding the nozzle cover (Fig. A.) Flip the machine over and remove the nozzle cover.
2. Remove the hall sensor spring screw, grounding screw, plate screw, and the washer and screw shown in Fig. B.
3. Lift the hall sensor wheel and remove the second plate screw (Fig. C.)
4. Use needle nose pliers to remove the hall sensor connector from the light board (Fig. 4.)
5. Remove and discard old hall sensor assembly. Install new hall sensor assembly and route the wire underneath the main harness wire as shown in Fig. B. Take care to avoid pinching any wires when reinstalling screws. Replace the nozzle cover.

***Note: The motor will shut down after a few seconds without the belt and agitator installed.**

Fig. A

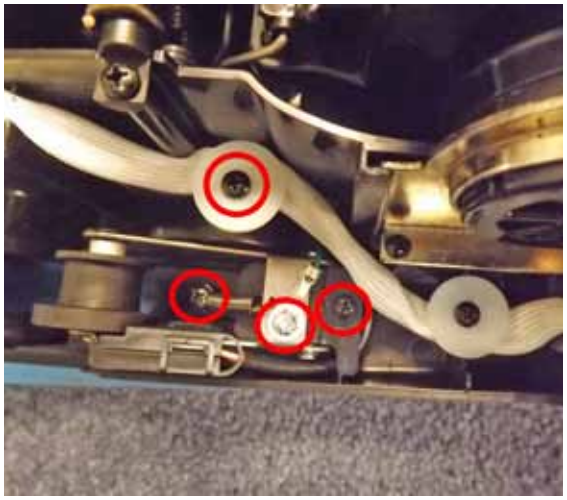

Fig. B

Fig. C

Fig. D

II. Maintenance and Repairs

AB. Replacing the Main PC Board

CAUTION: Unplug the vacuum cleaner before servicing.

NOTE: PC Board componants are sensitive to static shock. Use grounding strap and anti-static mat if possible and avoid touching board componants.

1. Access the motor compartment as shown on pages 38-39.
2. Slide the PC board out (Fig. A.)
3. Remove the large and small harness connectors (Fig. B.)
4. Disconnect the four pressure hoses from the back of the PC board (Fig. C.)
5. Reinstall the new board. Be sure all wires are properly routed as shown in Fig. D before reinstalling motor cover.

Fig. A

Fig. B

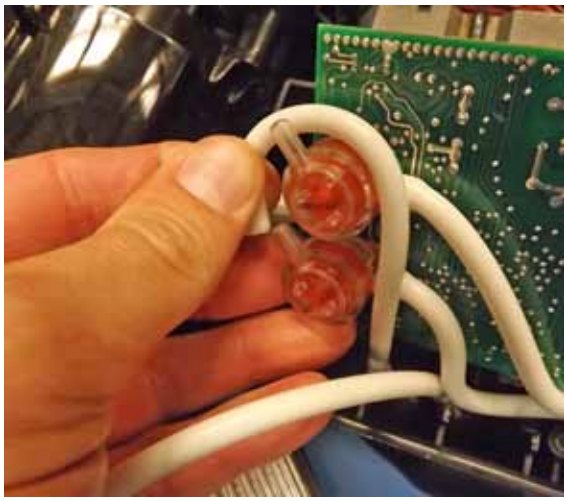

Fig. C

Fig. D

II. Maintenance and Repairs

AC. Replacing the Thermal Reset Switch

CAUTION: Unplug the vacuum cleaner before servicing.

1. Access the motor compartment as shown on pages 38-39.
2. Remove the clean air motor (Fig. A.)
3. Remove the two screws for the thremal reset (Fig. B.)
4. Use a soldering iron to desolder the thermal reset and solder in the new one. If this method cannot be used then cut the wires and splice them together or replace the entire wire harness.
5. Secure the thermal reset switch to the dust compartment using the two screws.
6. Reinstall the motor being careful not to pinch any wires and reassemble vacuum. For full reassembly instructions see page 41-45

Fig. A

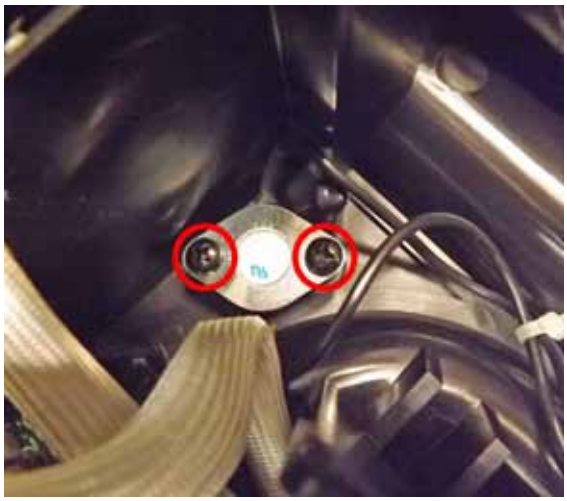

Fig. B

II. Maintenance and Repairs

AD. Replacing the Direct Air Motor

CAUTION: Unplug the vacuum cleaner before servicing.

1. Access the motor compartment as shown on pages 38-39.
2. Remove the one (1) pan head screw holding the motor (Fig. A.)
3. Remove the motor. Disconnect the wire leads using two pairs of needle nose pliers. First grip a con nector with each set of pliers as shown in Fig. B. Then press the tips of the plers together to separate the connectors as shown in Fig. C and Fig. D.
5. Install the new motor being careful to avoid pinched wires. See the wiring diagram on page 71.
5. Reassemble vacuum.

NOTE: If the vacuum is turned on without the agitator and belt installed the direct air motor will stop after a few seconds and the jam light will activate. To test the motor either fully reassemble the machine including the agitator and belt or install a hall sensor bypass plug.

Fig. A

Fig. B

Fig. C

Fig. D

II. Maintenance and Repairs

AE. Replacing the Clean Air Motor

CAUTION: Unplug the vacuum cleaner before servicing.

1. Access the motor compartment as shown on page 38-39.
2. Remove the motor (Fig. A and B.)
3. Disconnect the black and white leads. The yellow wire is not used. For easy disconnect instructions see step 3 on the previous page.
4. Install the new motor. See the wiring diagram on page 71. Route the wires as shown in Fig. D to avoid pinched wires.
5. Reassemble vacuum.

NOTE: If the vacuum is turned on without the agitator and belt installed the direct air motor will stop after a few seconds and the jam light will activate. To test the motor either fully reassembe the machine including the agitator and belt or install a hall sensor bypass plug.

Fig. A

Fig. B

Fig. C

II. Maintenance and Repairs

AF. Checking the Roto-Valve Micro Switch

CAUTION: Unplug the vacuum cleaner before servicing.

1. Turn the roto-knob to the left far enough to disengage the switch. Remove the screw for the roto-valve switch cover plate (Fig. A.)
2. Remove the roto-valve switch cover plate (Fig. B.)
3. Set a multimeter to Ohms and place one lead on each side of the switch as shown in Fig. C.
4. Actuate the switch. When the switch is closed the multimeter should ohm out (Fig. D.)

Fig. A

Fig. B

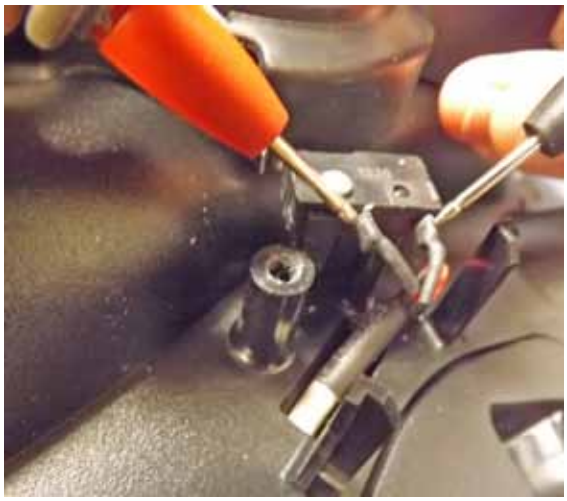

Fig. C

Fig. D

III. Troubleshooting

A. Vacuum Does Not Pick up Well

CAUTION: Unplug the vacuum cleaner before servicing

1. Replace the bag. Even if the bag is not full the pores could be clogged.
2. Check the filters. Replace as necessary.
3. Check the brush strips. If the brush strips are worn, replace. See pages 15-16 for instructions.
4. Check the hose for a clog. Inspect the hose for cracks or holes and reinstall on the machine.
5. Check the direct air motor clean out door. Remove the two screws on the lower back housing shown in Fig. A. Then remove the clean out door (Fig. B.) Look into the direct air motor fan for an obstruc tion. If no obstruction is found proceed to the next stp.
6. Check the condition of the belt. If the belt is worn or stretched, replace. See page 14 for instructions.
7. Check the nozzle air path for a clog (Fig. C.)
8. Check the back airpath for an obstruction (Fig. D.) See page 31-32 for instructions on removing the back cover. .

Fig. A

Fig. B

Fig. C

Fig. D

III. Troubleshooting

B. Vacuum is Hard to Push

CAUTION: Unplug the vacuum cleaner before servicing

1. Make sure the direct air motor is running. If it is not see page 51.
2. Check the brush strips for wear and replace as necessary. See pages 15-16 for instructions.
3. Check the belt for wear. If it is damaged or stretched, replace. See page 14 for instructions.
4. The bottom plate may be out of place. Check that it is flush with the bottom edge of the nozzle and reposition if necessary.
5. Check that all wheels are spinning freely. If not lubricate the axles or replace wheels as necessary.
6. Check that the spring assist is in place and not broken or damaged (Fig. A and B.) If the spring is broken or damaged replace as shown on page 46-47.

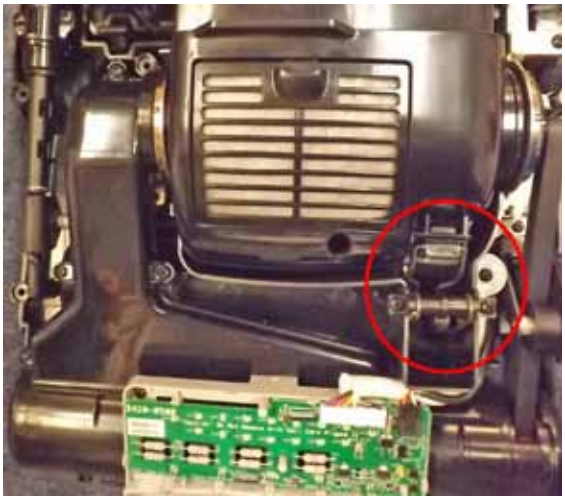

Fig. A

Fig. B

III. Troubleshooting

C. Belt Stretching or Breaking Prematurely

CAUTION: Unplug the vacuum cleaner before servicing

The R30 is equipped with a lifetime belt. This belt should not need to be replaced regularly like stretch belts on other vacuum cleaners. However the belt may become damaged and need to be replaced. If this happens frequently follow the steps below.

1. Check the agitator by removing it from the machine. Make sure that it is free and spins easily. If the agitator is hard to spin it may need service or replacement.
2. Check the motor pulley. Clean any residue or grit from the belt pulley. Inspect the grooves of the belt pulley (Fig. A.) If they are damaged or seem sharp, replace motor.
3. Check that the hall sensor is working properly. Turn the machine on and suck up a large shop towel or use the shoe from the demo kit. If the jam fuction does not activate then replace the PC board. See page 49 for instructions on replacing the PC board.

Fig. A

III. Troubleshooting

D. Machine Will Not Power on Section 1: Check Themal Breaker

CAUTION: Unplug the vacuum cleaner before servicing

1. Using a small tool or pen press the thermal reset on the back of the machine (Fig. A.)
2. Test machine. If it runs after pressing reset check for overfull bag or clog before returning to customer. If pressing thermal reset does not resolve issue continue to the next step.

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Fig. A

III. Troubleshooting

D. Machine Will Not Power on Section 2: Check Handle

CAUTION: Unplug the vacuum cleaner before servicing

1. Check that the handle screw is tight. If screw is loose, tighten it and retest.
2. Visually check the power cord for damage. If damaged replace and retest. If no damage is present test for power through the handle as follows.
3. Remove the handle screw and pull the handle out of the machine.
4. Using a multimeter check for continuity (Ohms) through the positive and neutral sides. Put one pin from the multimeter on the small blade of the wall plug (Fig A.) and the other on the the top right pin on the connector at the end of the handle (Fig. B.) Make sure the on/off switch is in the "On" position. The meter will read 0.00 if continuity is present Repeat this step with the large blade on the wall plug and the front right pin on the connector (Fig. D.) The multimeter should read 0. If continuity is not present then proceed to the next step to check the switch and power cord. If continuity is present then skip to page 60. *Continued on Next Page*

Fig. A

Fig. B

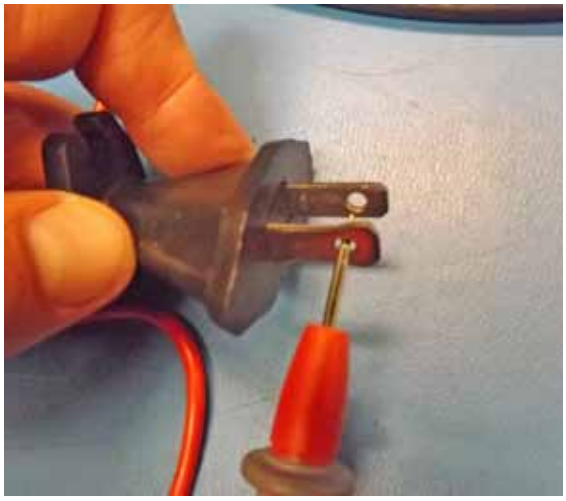

Fig. C

Fig. D

III. Troubleshooting

D. Machine Will Not Power on Section 3: Power Cord

CAUTION: Unplug the vacuum cleaner before servicing

1. Visually check the power cord for damage. If damaged replace and retest. If no damage is present test cord as follows.
2. Disassemble handle grip by removing the upper cord hook screw, cord hook and base. Then remove the six (6) screws.
3. Disconnect the cord leads.
4. Using a multimeter check the cord for continuity through the positive and neutral sides. Put one pin from the multimeter on the small blade of the wall plug (Fig. A) and the other on the black power cord wire that was connected to the switch (Fig. B) The meter will read 0.00 if continuity is present.
5. Repeat with the steps with the neutral wire (Fig C and D.)
   If continuity is not present then replace cord. If cord tests good then proceed to the next step.

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Fig. A

Fig. B

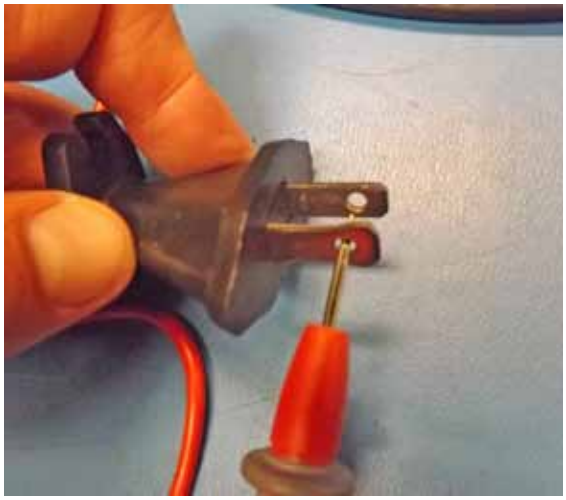


Fig. C

Fig. D

III. Troubleshooting

D. Machine Will Not Power on Section 4: Check On/Off Switch

CAUTION: Unplug the vacuum cleaner before servicing

1. Check the continuity through the switch. Place the multimeter leads on each side of the switch (Fig. A.) With the switch in the on position the multimeter should read zero. If it does not, replace switch. If switch tests good proceed to the next step.

Continuted on Next Page

Fig. A

Fig. B

III. Troubleshooting

D. Machine Will Not Power on Section 5: Check Thermal Reset

CAUTION: Unplug the vacuum cleaner before servicing

1. Access the motor compartment as shown on pages 38-39.
2. Remove the clean air motor and disconnect the black and white leads (Fig. A.) NOTE: The yellow wire from the clean air motor is not used.
3. Remove the two screws holding the thermal reset (Fig. B.)
4. Place one lead on each side of the thermal reset and check for continutity through it (Fig. C and D.)
5. If there is no continunity replace the thermal reset or the wire harness. See page 50 for instructions. If the thermal is good proceed to the next step.

Fig. A

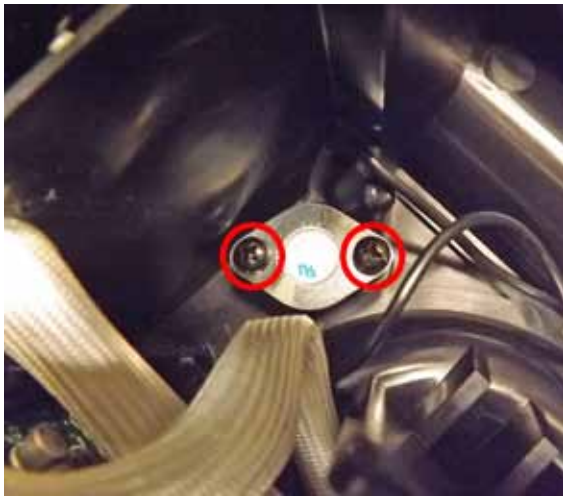


Fig. B

Fig. C

Fig. D

III. Troubleshooting

D. Machine Will Not Power on Section 6: Check Wire Harness

CAUTION: Unplug the vacuum cleaner before servicing

1. Install the handle on the vacuum.
2. Set the multimeter to test continuity (ohms) and place one of the leads on the small blade of the wall plug (Fig. A.)
3. Make sure the switch is in the on position and place the other lead onto the black wire (Fig. B.) The meter should show zero (0) if continuity is present. If the path tests good then check the neutral side as well.
   Place one lead on the large blade of the wall plug (Fig. C) and the other on the white wire (Fig D).
4. If there is no continuity through the main wire harness then replace it otherwise continue to the next step.

Fig. A

Fig. B

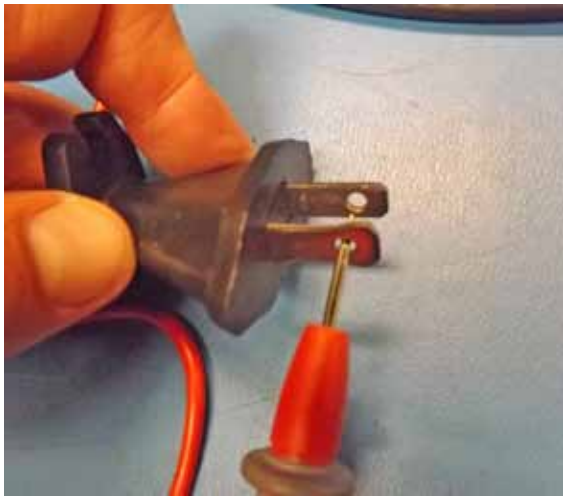


Fig. C

Fig. D

III. Troubleshooting

D. Machine Will Not Power on Section 7: Check The Motor

CAUTION: Unplug the vacuum cleaner before servicing

1. Visually inspect motor. Check motor commutator for excessive blackening or reddish color. Check the carbon brushes. Replace motor if necessary.
2. If all other componants test good replace the PC board. See page 49 for instructions.

III. Troubleshooting

E. Direct Air Motor Stops Running and Brushroll Jam Light is on

CAUTION: Unplug the vacuum cleaner before servicing

NOTE: If the belt and/or brushroll are not installed in the machine the motor will always stop and the jam light will activate. This is normal. Install the belt and brushroll to test the machine.

1. Check the brushroll for an obstruction. Remove any obstruction and retest. If no obstruction is present or problem persists procede to next step.
2. Remove the clean out door to check for a foreign object or damaged fan in the direct air motor. See instructions on page 51.
3. Remove brushroll and check that it spins freely. If not check the bearings. (For agitator disassembly instructions see pages 15-16.) Replace the bearings or brushroll. If brushroll spins freely or problem persists continue to the next step.
4. Check the belt for damage or excessive wear. If the grooves of the belt are damaged or if the belt seems stretched excessively, replace the belt. If problem persists proceed to the next step.
5. Check the motor pulley (Fig. A.) If the grooves are worn or damaged replace the motor. If the pulley looks OK continue to the next step.
5. Bypass the hall sensor using the test plug (D001-0001.).A test plug can be obtained from Vac Pros (800-827-8877).
6. Locate the hall sensor harness plug on the light board (Fig. B.) Unplug the hall sensor from the light board.

Continued on Next Page

Fig. A

Fig. B

III. Troubleshooting

E. Motor Stops Running and Brushroll Jam Light is on (Continued)

CAUTION: Unplug the vacuum cleaner before servicing

8. Insert the hall sensor test plug (Fig. C and D.)
9. Test the machine with the test plug installed. CAUTION: MOVING PARTS AND LIVE POWER. If the problem persists replace the PC board (see page 49)
10. If the symptom goes away with the test plug installed then replace the hall sensor assembly.

Fig. C

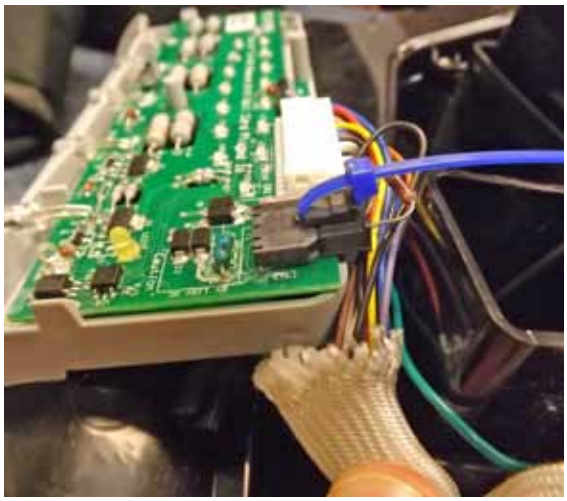


Fig. D

III. Troubleshooting

F. Excessive Vibration or Motor Noise

CAUTION: Unplug the vacuum cleaner before servicing

1. Determine where the noise originates from. Turn on the vacuum and then press the Carpet/Floor but ton to disengage the direct air motor and agitator. If the noise is still present with the direct air motor turned off then it is in the clean air motor. Inspect the motor for damage and replace as necessary. See page 52 for instructions on how access the clean air motor.
2. If the noise only occurs with the direct air motor running then check to see if the noise is originating f rom the agitator or the direct air motor. Remove the agitator from the vacuum and bypass the hall sensor using a bypass plug as shown on pages 15-16. If the noise is no longer present then the issue is with the agitator. Check agitator bearings and replace if necessary (See pages 15-16 for instuctions.) If bearings are good then the agitator is out of balance and should be replaced.
3. If the noise is still present when the brushroll is removed then there is a problem with the direct air motor. Remove the clean out door to check for a foreign object or damaged fan See instructions on page 40. Remove foreign object or replace fan as necessary. See page 40.
4. If noise or vibration persists the direct air motor is damaged. Replace the motor. (See page 51 for instructions on replacing the motor.) *e*

III. Troubleshooting

G. Direct Air Motor Does Not Run or is Intermittant- Part 1: Check Roto-Switch

CAUTION: Unplug the vacuum cleaner before servicing

Note: The direct air motor will not function if the vacuum is in the upright position. The tools knob must fully engaged in the Tools On position as well.

1. First ensure that the jam light is not activating. If it is see pages 64-65 to troubleshoot a jam condition.
2. Make sure the tools on/off knob is all the way in the “Tools On” position (Fig. A.) The knob must be fully engaged in the “Tools On” position and the vacuum must be in the operating position.
3. Remove one (1) screw to take off the cover plate for the roto-valve switch (Fig. B.)
4. Use a multimeter set to ohms to check the continuity through the roto-valve switch (Fig. C.)
5. If continuity is not presetnt with the switch closed then replace the switch. See page __ for instruc tions. If continuity is present proceed to the next step.

Fig. A

Fig. B

Fig. C

III. Troubleshooting

G. Direct Air Motor Does Not Run or is Intermittant- Part 2: Check Wing Switch

CAUTION: Unplug the vacuum cleaner before servicing.

1. Access the motor compartment as shown on pages 38-39.
2. Locate the wings switch and inspect it for damage (Fig. A.) The switch should be open by default. Check the wire leads and make sure they are secure and not pinched or cut.
3. Check continuity through the winged rocker switch with a multimeter set to ohms. The switch should show continuity in the open position (Fig. B.) If continutiy is not present replace switch. If continuity is present proceed to next step.
4. Replace the main PC board located in the motor compartment. See page 49 for instructions.

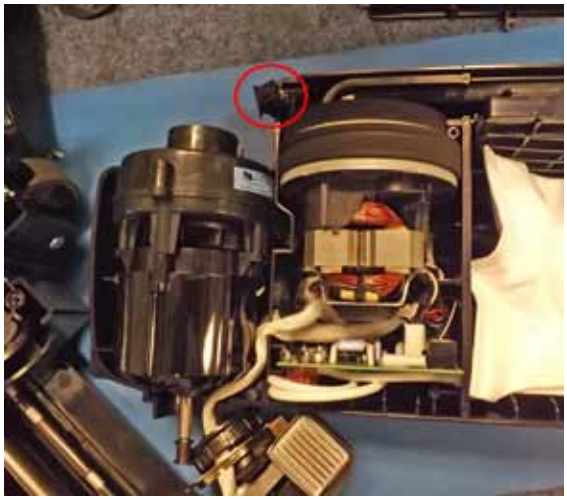


Fig. A

Fig. B

III. Troubleshooting

H. Thermal Breaker Trips Repeatedly

CAUTION: Unplug the vacuum cleaner before servicing

1. Replace the bag and filters. If problem persists there is a clog causing it to overheat.
2. The thermal breaker could be weak from repeated tripping. Replace breaker. (See page 50 for instructions.)
3. The motor could be overheating. Replace motor as shown on page 52.

I. Motor Going on and Off or Not Starting (Even with the Hall Sensor Bypassed)

CAUTION: Unplug the vacuum cleaner before servicing

1. First confirm the issue is not related to the hall sensor jam function by bypassing the hall sensor using the hall sensor test plug. If problem is not present with sensor bypassed then replace the hall sensor.
2. If problem persists inspect the motor. The carbon brushes could be stuck or worn out. Service or replace the motor as necessary.

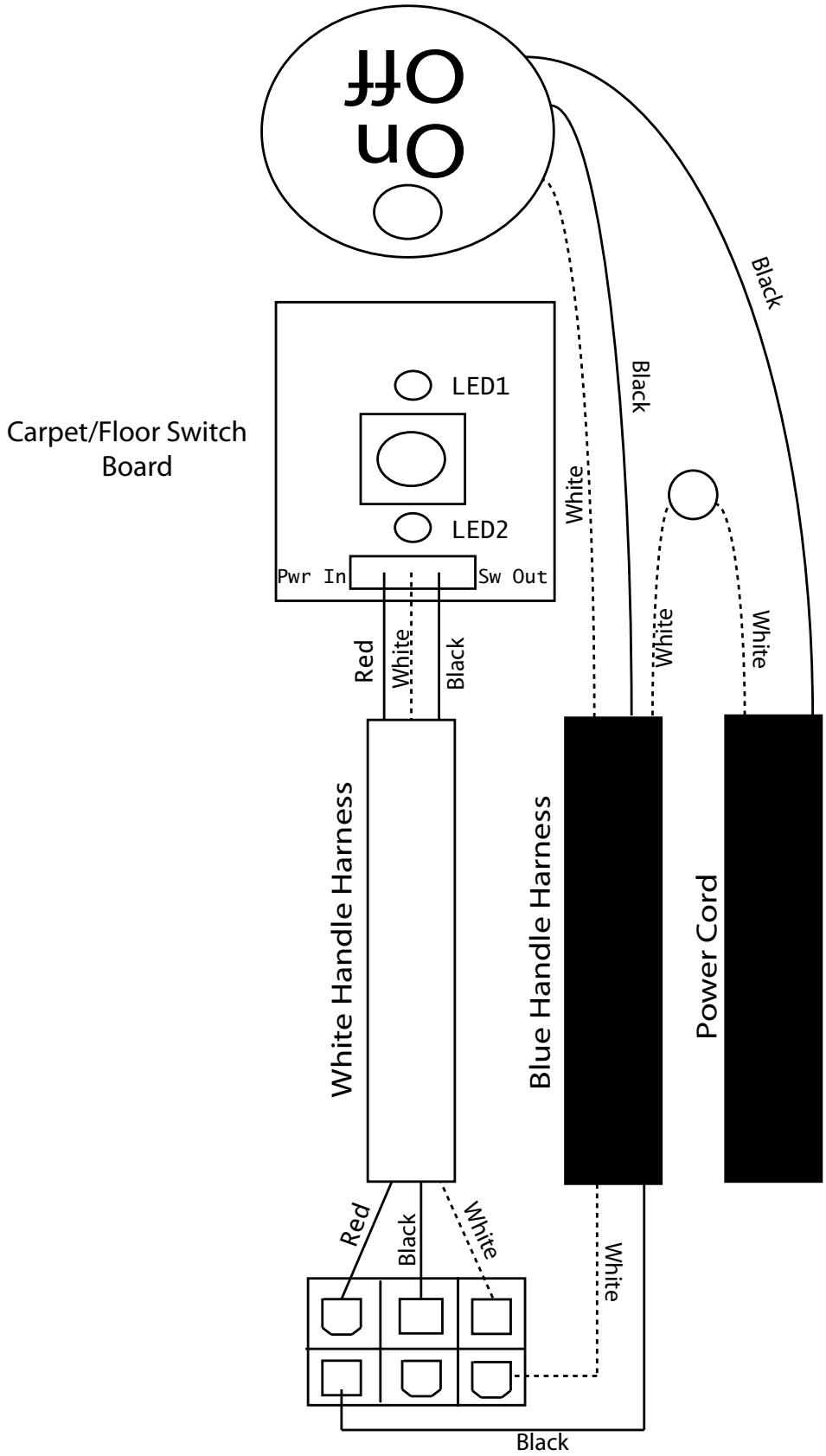
J. Power Cord Gets Warm to the Touch

CAUTION: Unplug the vacuum cleaner before servicing

1. Be sure the cord is completley uncoiled from the handle during use.
2. It is normal the cord to get warm during use. However, if the cord is too hot to hold onto then it may have broken wires inside. Inspect and replace as necessary.
3. Check the motor amperage. If the motor is not pulling the correct amperage, replace.

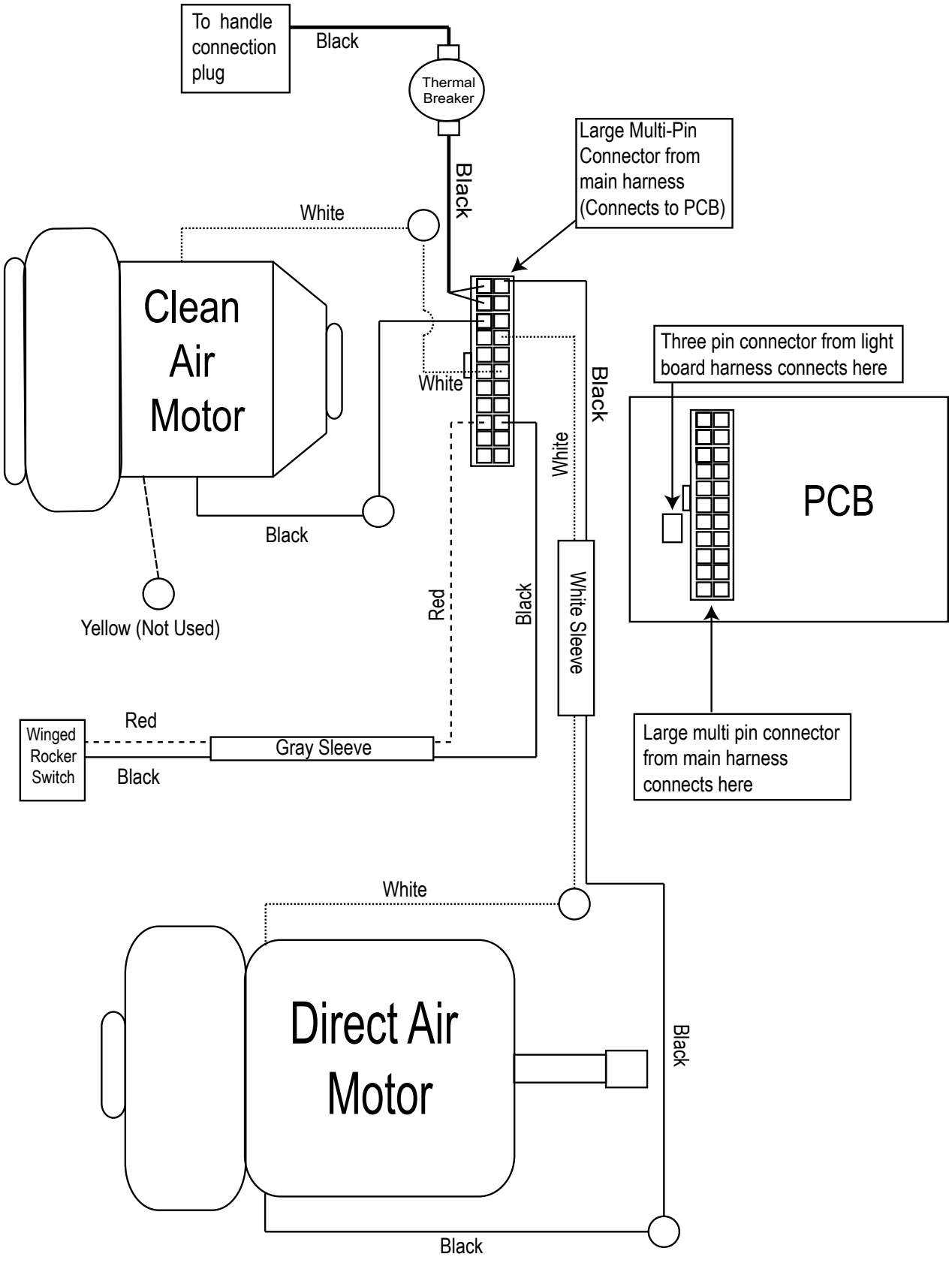
IV. Diagrams

A. Handle Wiring



IV. Diagrams

B. Motor Compartment Wiring



V. Contact Information

Should you need further assistance please contact your Vac Pros Representative or Tacony Technical Service

To Order Parts:

Vac Pros
Phone: 800-827-8877

For Technical Assistance:

Tacony Technical Service
Phone: 800-643-7459
Email: d.humphrey@tacony.com
r.morales@tacony.com